

only cyanate ester monomer, a cyanate ester prepolymer, or a mixture of the monomer and prepolymer;

an effective amount of a modifier for improving fracture properties of said bond and for assisting in reinforcing said bond, wherein the modifier includes a toughener;

a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond; and

a polymerization photoinitiator that includes a catalytically effective amount of an organometallic complex salt having a cation, upon photolysis, said polymerization photoinitiator liberating at least one coordination site and polymerizing the cyanate ester substance, wherein said cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

2. (TWICE AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, wherein said effective amount of the modifier includes a toughener comprised of elastomeric units.

3. The photoinduced polymerizable cyanate ester composition of claim 2, wherein said elastomeric units are encapped with reactive functional groups.

4. The photoinduced polymerizable cyanate ester composition of claim 2, wherein said elastomeric units have molecular weights ranging between approximately 500 and approximately 5000.

5. The photoinduced polymerizable cyanate ester composition of claim 1, wherein said effective amount of modifier includes elastomers, said elastomers reacting with said cyanate ester substance upon curing to form an epoxy terminated elastomer.

D7 6. The photoinduced polymerizable cyanate ester composition of claim 1, wherein said cyanate ester substance is solvent free.

Sub E2 7. (THRICE AMENDED) A process for providing a photoinduced polymerizable cyanate ester composition for use in reinforcing a bond, said process comprising the steps of:

D3 providing a cyanate ester substance that includes a cationically polymerizable composition from only cyanate ester monomer, a cyanate ester prepolymer, or a mixture of the monomer and prepolymer;

adding to the cyanate ester substance an effective amount of a modifier for enhancing fracture properties of said bond and for assisting in reinforcing said bond, wherein the modifier includes a toughener;

adding to the cyanate ester substance an effective amount of a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond; and

adding to the cyanate ester substance a polymerization photoinitiator that includes a catalytically effective amount of an organometallic complex salt having a cation, upon photolysis, the polymerization photoinitiator liberating at least one coordination site and curing the cyanate ester substance, wherein said cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

Sub E3 8 (FORTH AMENDED) A lead protective composition for use in reinforcing a bond comprising the polymerization product of:

a cyanate ester substance that includes only cyanate monomer;

D4 a polymerization photoinitiator that includes a catalytically effective amount of an organometallic complex salt having a cation, the polymerization photoinitiator liberating at least one coordinative site and polymerizing the at least one cyanate monomer, wherein said cation in the organometallic complex is selected from the group consisting of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB;

a filler, for controlling thermal expansion of said composition, for assisting in reinforcing said bond; and

an effective amount of a modifier for enhancing fracture properties of the protective composition and for assisting in reinforcing said bond, wherein the modifier includes a toughener.

9. (AMENDED) The lead protective composition of claim 8, wherein said effective amount of the modifier includes elastomeric units.

10. The lead protective composition of claim 9, wherein said elastomeric units are endcapped with reactive functional groups.

11. The lead protective composition of claim 9, wherein said elastomeric units have molecular weights ranging between approximately 500 and approximately 5000.

12. (AMENDED) The lead protective composition of claim 8, wherein said effective amount of the modifier includes elastomers, said elastomers reacting with said cyanate ester substance upon curing to form an epoxy terminated elastomer.

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13. (AMENDED) The lead protective composition of claim 8, further comprising a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3-glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

14. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, further comprising a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3-glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

15. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 14, wherein an amount of the surface treating agent is from about 3 to about 15 parts based on 100 parts of the composition.

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16. The photoinduced polymerizable cyanate ester composition of claim 1, wherein said toughening agent is selected from the group consisting of hydroxy-terminated

polysulfone oligomers elastomers, rubber, epoxy terminated elastomer, and combinations thereof.

17. The photoinduced polymerizable cyanate ester composition of claim 16, wherein said polysulfone oligomers have molecular weights ranging between approximately 500 and approximately 5000.

18. (AMENDED) The process of claim 7, further comprising adding a surface treatment agent, wherein the agent is selected from the group of surface treating agents consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

19. (NEW) The photoinduced polymerizable cyanate ester composition of claim 1, wherein said filler includes a fused or amorphous silica filler having a particle size from 0.5 to about 31 microns.

20. (NEW) The process for providing a photoinduced polymerizable cyanate ester composition of claim 7, wherein said filler includes a fused or amorphous silica filler having a particle size from 0.5 to about 31 microns.